

Aero Design Ltd.

Work Order Control Sheet

Work Order#: 2015-75 Date Opened: 24-Jun-15 Title: Assembly

Aircraft OEM: Eurocopter Aircraft Model: AS350/355 Product Type: Lid Product Model: XL Ski Quantity: 3

Work Order Contents

	Initial or N/A
Work Order/Build Sheets (Procedures Provided)	JC
Additional Work Sheets (Standard Practice)	N/A
Drawings (See List Below)	JC
Parts Distribution Sheet	JC
Sub Component Tags	N/A
Completed Certification (Original)	JC
Time Sheet (R&D)	N/A
Notes	N/A

Build Sheet Contents

	Initial or N/A
Tasks Initialled	JC
Dual Inspections Initialled	JC

Drawing List

Drawing #	Rev #	Description	Initial or N/A
94012	1	Lid Assembly	JC
70405	4	Lid Walkway	JC

Traveller

Initial or N/A

Component Completion

	As Instructed
Quantity Complete on This Work Order	3
Quantity Incomplete on This Work Order	0
Further Processing Required Before Release	N/A
Release to Stock as Components	N/A

Certification

	Initial or N/A
Form One Completed	N/A
Serviceable (Green) Tag Completed	N/A
In Process (Yellow) Tag Completed	N/A
Unserviceable (Red) Tag Completed	N/A
Parts Tracking Tag (White) Completed	JC
Parts Placed in Stores for Distribution	JC

Additional Documentation

	Initial or N/A
Documentation of a minor change	N/A
Non-Conformance Report Required	N/A
Service Difficulty Report Required	N/A

Billing

	Initial or N/A
Local (Aero Design)	JC
Research and Development	N/A
Third Party	N/A

Work performed by:

Print: M. Rekve

Sign:

M. Rekve

SCA: AD06

Date: 13-Jul-15

ICC / Dual Inspection preformed by:

Print: Jason Rekve

Sign:

Jason Rekve

SCA: AD01

Date: 13-Jul-15

Work Order closed by:

Print: Jeff Clarke

Sign:

Jeff Clarke

SCA: AD02

Date: 18-Jan-16

Approved Manufacturing Facility 73-04

Form 20.0.03

Rev. Original 23 Sep 2014

work order #2015-75 Date Open: 24-Jun-15

CARGO BASKET LID FABRICATION - COMMON

940

BASKET LID

x3

General

These instructions apply to all cargo basket lid assemblies. Refer to the following drawings, at the current revision, for dimensions and details:

Bell 206L/407 – Right side only

69812, Revision 3 – Standard Low Mounted Basket; Extra-Wide Low Mounted Basket

94612, Revision 0 – Extra-Wide Low Mounted Ski Basket

76612, Revision 0 – High Mounted Ski Basket

Eurocopter AS350/AS355 – left or right

77612, Revision 1 – Short Basket

69812, Revision 3 – Medium Basket (left and right)

78412, Revision 2 – Long Basket

→ 94012, Revision 0 – Extra Large (ski) Basket
100

Robinson R44 – left or right

90612, Revision 0 – Standard Basket (left or right)

Bell 206B – right side only

80212, Revision 0 – Short Basket

80312, Revision 0 – Medium Basket

81112, Revision 0 – Long Basket

Bell 429 – right or left

95912, Revision 0 – Standard Basket

Bell Medium – left or right

75112, Revision 0 – Standard Basket

95512, Revision 0 – Extra Large (ski) Basket

MD600

82812, Revision 0 – Standard Basket

Options

→ 70405, Revision 3 – Walkway
400

70402, Revision 1 – Lid Door

CARGO BASKET LID FABRICATION

Complete
(initial or SCA #)

Work Order: 2015-75

Date Open: 24-Jun-15

1. Rim Assembly – Basket Lid

- a. Cut and fit $\frac{3}{4}$ " x 0.035 material to fit rim jig, 45 degree ends.
 - i. 1 or 2 lid prop bushing holes in short tube – refer to drawing
- b. Record material PO on attached material list.
- c. Remove writing on tubes with acetone and scotch bright.

AD06

2. Weld Rim Assembly

- a. Record welding rod PO on attached material list.

+ AD-05

3. Inspection

- a. Rim for complete welds

AD06

4. Frame assembly – Lid

- a. General
 - i. Vent holes shall be #30 (0.129), and located inside the structure wherever possible to allow venting of weld gasses through existing holes (i.e. lid prop bushing)
- b. Insert rim from step 2 into jig.
- c. Cut and fit $\frac{3}{4}$ " x 0.035 material, 21" long, for lid cross members.
- d. Record material PO on attached material list.
- e. Remove writing on tubes with acetone and scotch bright.
- f. Drill vent holes into rim to vent cross members into rim.
- g. Locate cross members in lid rim. Refer to drawing for spacing of cross members. Clamp cross members with C-clamps to jig.

AD06

5. Frame assembly – Lid with optional walkway modification

- a. Fit cross members to rim in accordance with step 4.
- b. Attach walkway jig with C-clamps. Ensure correct orientation of rim, refer to drawing.
- c. Cut $\frac{1}{2}$ " x 0.035 material for walkway stringers to fit between lid cross members. Record material PO on attached material list.
- d. Drill vent holes into cross members at walkway stringers.
- e. Align walkway stringers on walkway jig using cleco clamps near both ends of each stringer, and clamp stringer to jig using a C-clamp in the centre.

AD06

6. Weld frame assembly.

- a. Record welding rod PO on attached material list.
- b. Jigs must remain in place for as long as practical during welding.

+ AD-05

7. Inspection

- a. Frame assembly for complete welds.

AD06

CARGO BASKET LID FABRICATION

Complete
(initial or SCA #)

AD-06

8. Mesh assembly.

Note: 95912 (Bell 429) does not have mesh. Skip to step 10.

- a. Pull sheet of expanded mesh from stock. Record material PO on attached material list.
- b. Cut mesh to size for lid.
- c. Remove surface rust with scotch-brite.
- d. Ensure lid is prepared for mesh on the correct side.

9. Weld mesh to frame assembly per drawing.

AD-05

- a. General welding requirements for all lids:
 - i. Every intersection on all edges.
 - ii. First 5 intersections along cross members, then every second intersection.
- b. MIG weld both short sides.
- c. Clamp lid over spacer at centre of lid to pre-tension mesh.
 - i. $\frac{3}{4}$ " for lids under 76"
 - ii. 1" (check) for lids over 76"
- d. Weld remainder of mesh as indicated in a.
- e. Record welding rod PO on attached material list.

10. Weld lid components.

AD-05

- a. Handle brackets, locate in accordance with drawing.
 - i. Standard location: $\frac{1}{4}$ " outside of last cross member on both ends.
 - ii. Record handle bracket WO and welding rod PO on attached material list.
- b. Lid prop bushing(s).
 - i. one or two in accordance with drawing.
 - ii. Record lip prop bushing WO and welding rod PO on attached material list.
- c. Placard bracket. – not installed on 95912 (Bell 429)
 - i. Locate on cross member to set bracket in centre bay of lid.
 - ii. Record placard bracket WO and welding rod PO on attached material list.

11. Clean up

AD-06

- a. Grind high spots off mesh welds.
- b. Tighten mesh using special pliers. Tighten enough to remove "oil canning", where mesh springs in or out.
- c. Straighten lid using frame attached under welding table. Work carefully, avoid excessive force to prevent kinking rim tubes.
- d. Drill #9 through lid prop bushing(s). De-burr hole(s).
- e. Drill for lid bumpers using $\frac{1}{4}$ " (#3) centre drill.
 - i. 3 places for lids under 76"
 - ii. 4 places for lids over 76"
- f. Remove surface rust with scotch-brite pad.

12. Final Inspection

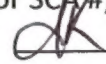
To be completed by a different person than the previous steps.

AK

- a. Basket lid assembly for complete welds, and required minimum mesh weld locations.
- b. Material lists complete.
- c. Overall condition and conformity to drawing(s).

CARGO BASKET LID FABRICATION

Complete
(initial or SCA #)



13. Powder Coating

- a. Parts are to be powder coated white in accordance with commercial practices.
- b. Record powder coating PO.
- c. Inspect powder coating on receiving.
- d. Tag lid assembly and place into stock in preparation for assembly.

Work Order: 2015-75Date Opened: 24-Jun-15Material Tracking Sheet
Eurocopter AS350 / AS355
Extra Large Lid Fabrication

1 of 2

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
	3	94012	94012-01	Lid Assembly		
Step 1				Rim Assembly		
	. 2		--	3/4" Tube - Long Rim (97")	4130 Steel, 3/4" x 0.035 Sqr. Tube	14099
	. 2		--	3/4" Tube - Short Rim (22.5")	4130 Steel, 3/4" x 0.035 Sqr. Tube	14099
Step 2				Weld Rim Assembly		
	. A/R			Welding Rod	ER70S-2 TIG Rod	14033
Step 3				Inspection - Rim	None	
Step 4				Frame Assembly		
	. 4		--	3/4" Tube - Cross Member (21")	4130 Steel, 3/4" x 0.035 Sqr. Tube	14009
Step 5		70405		Option: Frame Assembly - with walkway		
	. 10		--	1/2" Tube - walkway	4130 Steel, 1/2" x 0.035 Sqr. Tube	14099
Step 6				Weld Frame Assembly		
	. A/R			Welding Rod	ER70S-2 TIG Rod	14033
Step 7				Inspection - Frame Assembly	None	
Step 8				Mesh Assembly		
	. 1		--	Mesh (lid - 96" x 22")	3/4-16F Expanded Mild Steel sheet	12130
Step 9				Weld Mesh		
	. A/R			Welding Rod	ER70S-6 MIG Wire	14028

Work Order: _____

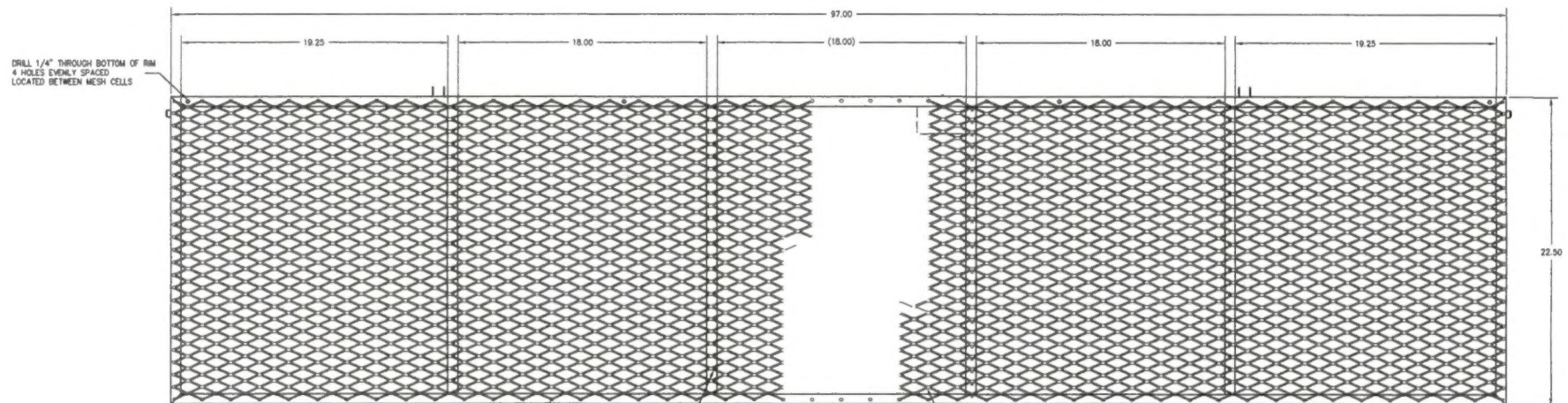
Material Tracking Sheet
Eurocopter AS350 / AS355
Extra Large Lid Fabrication

2 of 2

Date Opened: _____

Ass'y Step	Qty	Detail Drawing	Part Number	Description	Material	PO/WO
Step 10				<i>Weld Lid Components</i>		
	. 1	84262	84262-01	Upper Handle Bracket Assembly		
	. . 4		36273-01	Lid Bracket	321 Stainless, 0.050 Sheet	2614-38
	. . 2		36275-02	Support	304 Stainless, 5/16" Rod	
	. A/R			Welding Rod	ER308L TIG Rod	14028
	. 2		49216-01	Spacer (Lid prop)	304 Stainless, 1/2" Dia.	2015-07
	. A/R			Welding Rod	ER308L TIG Rod	14028
	. 1		36204-10	Placard Bracket	1018 Steel, 0.035" Sheet	2614-81
	. A/R			Welding Rod	ER70S-2 TIG Rod	14028
Step 11				<i>Clean Up</i>		
Step 12				<i>Inspection - Final Assembly</i>		
Step 13				<i>Powder Coating</i>		15047

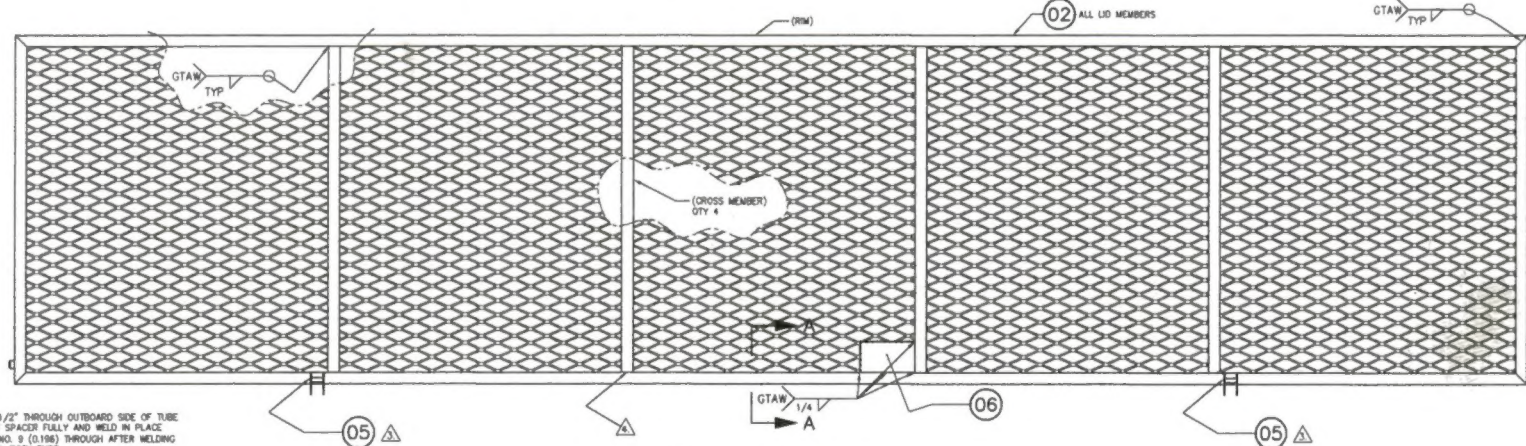
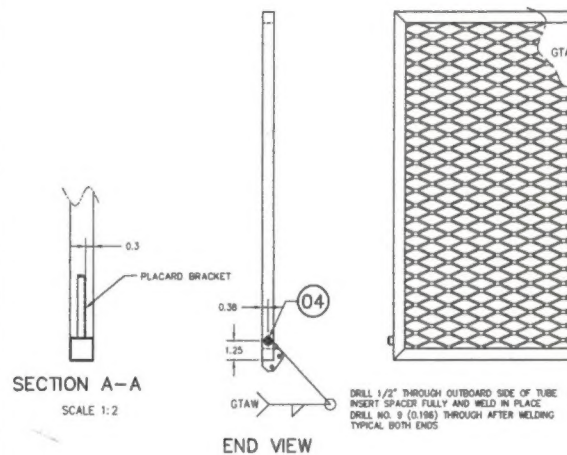
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REV	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE		
1	TITLE BLOCK UPDATED: CHANGED 36273-01 TO 84263-01; ITEM #'S ADDED	BUC	16/07/2014
	WELDING ROD UPDATED: # OF WELDS DOWN BRACE TUBES INCREASED		



GTAW TYP
ATTACHMENT OF MESH TO RIM:
WELD EACH INTERSECTION

GTAW TYP
ATTACHMENT OF MESH TO CROSS MEMBERS:
WELD FIRST FIVE INTERSECTIONS
THEN EVERY SECOND INTERSECTION
ADDITIONAL WELDS ARE PERMITTED AS REQUIRED

BOTTOM VIEW 03 MESH



TOP VIEW
01 LID ASSEMBLY

NOTES:

1. REMOVE ALL BURRS AND BREAK SHARP EDGES.
2. WELDING OF 4130 STEEL TO BE COMPLETED BY GTAW METHOD TO AWS 2685C.
4130 AND 1018 STEEL: WELDING ROD SHALL CONFORM TO ER70S-2 OR EQUIVALENT.
STAINLESS AND 4130 STEEL: WELDING ROD SHALL CONFORM TO ER308L OR EQUIVALENT.
3. INSTALL ITEM 5 (LID HANDLE PROVISIONS ASSEMBLY) IN ACCORDANCE WITH AERO DESIGN LTD. DRAWING 84263.
4. DRILL #30 (0.129) HOLES IN LONG TUBE MEMBERS AT BRACE LOCATIONS TO VENT WELD GASSES.
WHEN ASSEMBLY IS COMPLETE, FILL ALL EXPOSED VENT HOLES WITH ROSETTE WELD.
5. FINISH: THOROUGHLY CLEAN AND POWDER COAT LID ASSEMBLY.

QTY	PART NO.	ITEM	DESCRIPTION	MATERIAL	MATERIAL SPEC	STOCK SIZE
1	36204-10	06	PLACARD BRACKET			
1	84263-01	05	LID HANDLE PROVISIONS ASSEMBLY			
2	45216-01	04	SPACER			
A/R	3/4 - 16F	03	MESH	MILD STEEL	COMMERCIAL	
A/R		02	SQUARE TUBE	4130 STEEL, COND. N	MIL-T-8736	0.75 X 0.035 SQR TUBE
	94012-01	01	LID ASSEMBLY			
QTY	PART NO.	ITEM	DESCRIPTION	MATERIAL	MATERIAL SPEC	STOCK SIZE

LIST OF MATERIALS


APPROVALS	DATE	AERO DESIGN LTD.	
DRAWN: R. RATHWELL	05 AUG 11	888A MALASPINA ROAD POWELL RIVER, BC, CANADA, V8A 0G3 TEL: 804.483.3376 www.aerodesign.ca	
CHECKED: E. BURGON		EUROCOPTER AS350 & AS355 SERIES QUICK RELEASE CARGO BASKET LID ASSEMBLY (EXTRA LARGE)	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON:		DECIMALS	ANGLES
		X.XXX ±0.010	±1/2°
		X.XX ±0.03	
		X.X ±0.1	
SCALE 1:4		DWG. NO.	REV.
SHEET 1 OF 1		A1 94012	1

REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
1	ADD BELL MEDIUM AND EUROCOPTER AS350 BASKETS, CHANGE TUBES	BJC	MAR 19/08
2	ADD EUROCOPTER ECT35, McDONNELL DOUGLAS MD600N, BELL 206B BASKETS	BJC	DEC 4/08
3	ADD NEW AS350 AND 206L/407 MODELS	BJC	DEC 4/08
4	TITLE BLOCK UPDATED; MODEL LIST REMOVED; ADD ALT. RIVET; ADD NOTE 7	BJC	29/05/2014



1. THIS DRAWING IS AN OPTIONAL CONFIGURATION ADDING A TREAD PLATE STEP TO THE LID. THIS CONFIGURATION MAY BE APPLIED TO ANY OR ALL BAYS OF THE LID. THE REMAINDER OF THE LID (ITEM 03) MUST BE FABRICATED IN ACCORDANCE WITH THE APPLICABLE DRAWINGS.
2. TREADS (ITEM 03) MUST BE WELDED TO THE FRAME BEFORE MESH IS WELDED ON BOTTOM.
3. REMOVE ALL BURRS AND BREAK SHARP EDGES.
4. WELDING OF 4130 STEEL TO BE COMPLETED BY OTAW METHOD TO AMS 2855C. WELDING ROD SHALL CONFORM TO ER70S-2 OR EQUIVALENT.
5. WHEN ASSEMBLY IS COMPLETE, FILL ALL VENT HOLES WITH ROSETTE WELD.
6. THOROUGHLY CLEAN AND POWDER COAT BASKET SHED ASSEMBLIES PRIOR TO ASSEMBLY.
7. REMOVE TREAD PLATE AFTER POWDER COATING.
8. WIDTH AND POSITION OF LID STEP MAY BE ADJUSTED TO MATCH LID DOOR INSTALLED IN ACCORDANCE WITH DRAWING 70402 ON ADJOINING BAY OF THE LID.

A/R	CR3213-4-02	BLIND RIVET	ALTERNATE: HR3213-4-02			
1	70405-04	04 TREAD PLATE	ALUMINUM	COMMERCIAL	0.063 TREAD PLATE	
2	70405-03	03 TUBE	4130 STEEL COND. N	ML=1-6736	0.5 X 0.035 WALL TUBE	
1	SEE NOTE 1	02 BASKET LID ASSEMBLY				
	70405-01	01 BASKET LID ASSEMBLY - MODIFIED WITH STEP				
Q1	PART NO.	ITEM	DESCRIPTION	MATERIAL	MATERIAL SPEC	STOCK SIZE
QTY	LIST OF MATERIALS					

BASIC CODE REF. NAS 523		DASH NO. FOR DIMETER N=HIPS HEAD F=HIPS HEAD FAR SIDE		APPROVALS DRAWN: JEFF CLARKE CHECKED: E BURGOON		DATE 21 SEPT 2008				AERO DESIGN LTD. 6888A MALAPASODA RD POWELL RIVER, BC, CANADA, V8A 0G3 TEL: 804-683-5379 www.aerodesign.ca	
C=COUNTERSINK D=DIPLE DIGT=# OF SHEETS TO BE DIMPLED		DASH NO. FOR LENGTH		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON:		ANGLES $\pm 1/2^\circ$		CARGO BASKET LID STEP MODIFICATION		DRG. SIZE SCALE 1 : 1.5	
BASIC CODES: B1=MS20470AD B2=MS20424AD ARM=CR3212 ARM=CR3212		+ ⊕ INSTALL NEW RIVET + ⊕ REMOVE/REPLACE RIVET - ⊖ EXISTING RIVET		DECIMALS X.XXX ± 0.010 X.XX ± 0.03 X.X ± 0.1		SHEET 1 OF 1		A1		70405	
								4		4	